COLOR SMOOTH ERROR DIFFUSION

5 ## ABSTRACT OF THE INVENTION

Embodiments of the present invention include a method for generating a halftone image. This method comprises the steps of choosing a set of allowed colors, processing a color value, quantizing color value, and outputting a halftone

10 pixel according to quantizing step. In one embodiment, a look up table is utilized to provide significant speedup over conventional implementations, especially in when implemented in software. The result is high quality imaging with excellent color smoothness and sharpness.